

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

NETLIST, INC.

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD.,  
SAMSUNG ELECTRONICS AMERICA, INC.  
and SAMSUNG SEMICONDUCTOR, INC.,

Defendants.

Civil Case No. 2:21-cv-00463-JRG

**JURY TRIAL DEMANDED**

**THE SAMSUNG DEFENDANTS' ANSWER TO FIRST AMENDED COMPLAINT**

Defendants Samsung Electronics Co., Ltd. ("SEC"), Samsung Electronics America, Inc. ("SEA"), and Samsung Electronics Semiconductor, Inc. ("SSI") (collectively referred to herein as "Samsung" or "Defendants") file this Answer to the First Amended Complaint for Patent Infringement ("First Amended Complaint"; Dkt. No. 23) filed by Plaintiff Netlist, Inc. ("Netlist" or "Plaintiff"). Samsung denies the allegations and characterizations in Netlist's First Amended Complaint unless expressly admitted in the following numbered paragraphs, which correspond to the numbered paragraphs in the First Amended Complaint.

1. Samsung admits that Plaintiff's pleading purports to be a First Amended Complaint against Samsung Electronics Co., Ltd. ("SEC"), Samsung Electronics America, Inc. ("SEA"), and Samsung Semiconductor, Inc. ("SSI"). Samsung lacks knowledge or information

sufficient to form a belief about the truth of the other allegations in Paragraph 1 of the First Amended Complaint, and therefore denies them.

2. To the extent that the allegations of Paragraph 2 set forth legal conclusions, no response is required. Samsung admits that Netlist filed its Initial Complaint against Samsung on December 20, 2021, which included allegations of infringement of three patents: U.S. Patent Nos. 10,860,506 (the “’506 Patent,”), 10,949,339 (the “’339 Patent,”), and 11,016,918 (the “’918 Patent,”). Samsung admits that purported copies of the ’506 Patent, the ’339 Patent, the ’918 Patent, and the ’054 Patent are attached to the First Amended Complaint as Exhibits 1, 2, 3, and 4, respectively. Samsung admits that on December 28, 2021, Samsung filed an unopposed motion to set the deadline for Samsung’s answer to the Initial Complaint as April 12, 2022. Dkt. 10. Samsung admits that the Defendants collectively filed an answer on April 12, 2022 (Dkt. 16). Samsung admits that Netlist filed a First Amended Complaint on May 3, 2022. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 2 of the First Amended Complaint, and therefore denies them.

3. To the extent that the allegations of Paragraph 3 set forth legal conclusions, no response is required. Samsung admits of Netlist’s First Amended Complaint identifies six patents: the ’506 Patent, the ’339 Patent, the ’918 Patent, the ’054 Patent, U.S. Patent No. 8,787,060 (the “’060 Patent”), and U.S. Patent No. 9,318,160 (the “’160 Patent”) (collectively, the “Patents-In-Suit”). Samsung admits that purported copies of the ’060 Patent and the ’160 Patent are attached to the First Amended Complaint as Exhibits 5 and 6, respectively. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 3 of the First Amended Complaint, and therefore denies them.

### **THE PARTIES<sup>1</sup>**

4. To the extent that the allegations of Paragraph 4 set forth legal conclusions, no response is required. Samsung admits that Netlist is a corporation organized and existing under the laws of the State of Delaware. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 4 of the First Amended Complaint, and therefore denies them.

5. To the extent that the allegations of Paragraph 5 set forth legal conclusions, no response is required. SEC admits it is a corporation organized and existing under the laws of the Republic of Korea, with its principal place of business located at 129 Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea. SEC admits that it is a parent corporation of SEA and SSI. SEC admits that the Device Solutions division has involvement in certain semiconductor products. SEC admits that it is involved in the design, manufacture, and provision of certain products sold by SEA. Samsung denies any remaining allegations of Paragraph 5.

6. To the extent that the allegations of Paragraph 6 set forth legal conclusions, no response is required. SEA admits it is a corporation organized and existing under the laws of New York. SEA admits that it maintains an office at 6625 Excellence Way, Plano, Texas 75023 and that its registered agent is CT Corporation System, located at 1999 Bryan Street, Suite 900, Dallas, Texas 75201. SEA further admits that it is a wholly owned subsidiary of SEC. Samsung denies any remaining allegations of Paragraph 6.

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<sup>1</sup> Samsung repeats the headings set forth in the First Amended Complaint to simplify comparison of the First Amended Complaint and this response. In doing so, Samsung makes no admissions regarding the substance of the headings or any other allegations of the First Amended Complaint. Unless otherwise stated, to the extent that a particular heading can be construed as an allegation, Samsung specifically denies all such allegations.

7. To the extent that the allegations of Paragraph 7 set forth legal conclusions, no response is required. SSI admits that it is a corporation organized and existing under the laws of California. SSI admits that its registered agent is National Registered Agents, Inc., 1999 Bryan St., Ste. 900, Dallas, TX 75201. SSI further admits that it is a wholly owned subsidiary of SEA. Samsung denies any remaining allegations of Paragraph 7.

8. To the extent that the allegations of Paragraph 8 set forth legal conclusions, no response is required. Samsung denies that SEC and SSI make the Accused Instrumentalities in this judicial district. Samsung denies that SEA makes or sells the Accused Instrumentalities in this judicial district. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 8 of the First Amended Complaint, and therefore denies them.

### **JURISDICTION AND VENUE**

9. To the extent that the allegations of Paragraph 9 set forth legal conclusions, no response is required. Samsung admits that this Court has subject matter jurisdiction pursuant to 28 U.S.C. § 1338 in that this action arises under the patent laws of the United States, 35 U.S.C. Title 35 § 101 *et seq.*, but denies that Netlist's claims are meritorious. Samsung denies all allegations of patent infringement, and further denies that Netlist is entitled to any relief for its allegations of patent infringement whether by award of damages, injunction, or otherwise. Samsung denies any remaining allegations in Paragraph 9.

10. To the extent that the allegations of Paragraph 10 set forth legal conclusions, no response is required. Except as expressly admitted, Samsung lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 10, and therefore denies them.

11. To the extent that the allegations of Paragraph 11 set forth legal conclusions, no response is required. Samsung denies that SEC and SSI make the Accused Instrumentalities in the State of Texas or the Eastern District of Texas. Samsung denies that SEA makes or sells the Accused Instrumentalities in the State of Texas or the Eastern District of Texas. Except as expressly admitted, Samsung lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 11, and therefore denies them.

12. To the extent that the allegations of Paragraph 12 set forth legal conclusions, no response is required. Samsung denies that SEC maintains a regular and established place of business at 6625 Excellence Way, Plano, Texas 75023. Samsung admits that SEA maintains an office at 6625 Excellence Way, Plano, Texas 75023. Samsung denies that it has committed acts of infringement in this District or elsewhere, or that it has committed any act, directly or indirectly, that would give rise to any cause of action under the First Amended Complaint. Samsung denies that venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b) and (c) and/or 1400(b), in part, because the Patents-In-Suit are properly part of a declaratory judgment action in the District of Delaware, which was filed over two months before this action. *See Samsung Electronics Co., Ltd., et al. v. Netlist, Inc.*, Case No. 1:21-cv-01453, Dkt. No. 1 (D. Del.) (the “Delaware Declaratory Judgment Action”) (filed on October 15, 2021). Because Samsung filed the Delaware Declaratory Judgment Action before this action, the claims should proceed in Delaware under the first-to-file rule. *See Merial Ltd. v. Cipla Ltd.*, 681 F.3d 1283, 1299 (Fed. Cir. 2012). This rule applies in cases of duplicative infringement and declaratory judgment actions filed in separate district courts. *See, e.g., id.*; *see also Elecs. for Imaging, Inc. v. Coyle*, 394 F.3d 1341, 1345–46 (Fed. Cir. 2005). The Delaware Declaratory Judgment Action is the first-filed action with respect to the claims concerning the Patents-In-Suit because these

claims relate back to the claims in Samsung’s complaint in the Delaware Declaratory Judgment Action. *See Merial*, 681 F.3d at 1299 (“[W]hat matters is the initiation of suit.”); *see also Anza Tech., Inc. v. Mushkin, Inc.* 934 F.3d 1359, 1369–70 (Fed. Cir. 2019) (“[N]ewly alleged claims, based on separate patents, relate back to the date of the original complaint” where “the general factual situation or the aggregate of operative facts underlying the original claim for relief [gives] notice to [the other party] of the nature of the allegations it was being called upon to answer.”). Samsung denies any remaining allegations in Paragraph 12.

13. To the extent that the allegations of Paragraph 13 set forth legal conclusions, no response is required. Samsung admits that it did not contest proper venue in *Arbor* or *Acorn* solely for the purposes of those actions. *See Arbor Global Strategies LLC v. Samsung Elecs. Co., Ltd.*, No. 2:19-cv-333, Dkt. 43 at ¶ 10 (E.D. Tex. Apr. 27, 2020) (“The Samsung Defendants, however, do not contest, ***solely for purposes of the present action***, whether venue over them properly lies in this District, but the Samsung Defendants deny that venue in this District is convenient.”) (emphasis added); *see also Acorn Semi, LLC v. Samsung Elecs. Co., Ltd.*, No. 2:19-cv-347, Dkt. 14 at ¶ 29 (E.D. Tex. Feb. 12, 2020) (“Samsung does not contest at this time, and ***solely for the purpose of the present litigation***, whether venue over it properly lies in this District, but SEC, SSI and SAS deny that venue in this District is convenient and SEC, SSI and SAS reserve the right to seek transfer to a more appropriate or convenient forum have not contested proper venue in this District.”) (emphasis added). Except as expressly admitted, the Samsung Defendants lack knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 13, and therefore deny them.

## **FACTUAL ALLEGATIONS**

### **Background**

14. To the extent that the allegations of Paragraph 14 set forth legal conclusions, no response is required. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 14 of the First Amended Complaint, and therefore denies them.

15. To the extent that the allegations of Paragraph 15 set forth legal conclusions, no response is required. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 15 of the First Amended Complaint, and therefore denies them.

16. To the extent that the allegations of Paragraph 16 set forth legal conclusions, no response is required. Samsung denies that the allegations in Paragraph 16 of the First Amended Complaint are complete or accurate, and on that basis denies them.

17. To the extent that the allegations of Paragraph 17 set forth legal conclusions, no response is required. Samsung admits that the JEDEC Solid State Technology Association (“JEDEC”) is a standardization body that develops open standards and publications for a broad range of semiconductor technologies, including memory modules. Samsung denies that the remaining allegations in Paragraph 17 of the First Amended Complaint are complete or accurate, and on that basis denies them.

### **The Asserted Netlist Patents**

#### **The '506 Patent**

18. To the extent that the allegations of Paragraph 18 set forth legal conclusions, no response is required. Samsung admits that the '506 Patent states, on its face, that it is entitled “Memory Module With Timing-Controlled Data Buffering” and that it lists Hyun Lee and Jayesh

R. Bhakta as inventors. Samsung further admits that the '506 Patent states, on its face, that it was filed as Application No. 16/391,151 on April 22, 2019, issued as a patent on December 8, 2020, and purports to claim priority to, among others, a utility application filed on July 27, 2013 (No. 13/952,599) and a provisional application filed on July 27, 2012 (No. 61/676,883).

Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 18 of the First Amended Complaint, and therefore denies them.

19. To the extent that the allegations of Paragraph 19 set forth legal conclusions, no response is required. Samsung admits that Netlist alleged infringement of the '506 Patent in its Initial Complaint filed on December 20, 2021. Samsung denies the remaining allegations in Paragraph 19 of the First Amended Complaint.

20. To the extent that the allegations of Paragraph 20 set forth legal conclusions, no response is required. Samsung admits that the '506 Patent includes the language "distribution of control signals and a control clock signal in the memory module is subject to strict constraints." '506 Patent at 2:17-19. Samsung admits that the '506 Patent includes the language "control wires are routed so there is an equal length to each memory component, in order to eliminate variation of the timing of the control signals and the control clock signal between different memory devices in the memory modules." '506 Patent at 2:19-23. Samsung admits that the '506 Patent includes the language "[t]he balancing of the length of the wires to each memory devices compromises system performance, limits the number of memory devices, and complicates their connections." '506 Patent at 2:23-26. Samsung admits that the '506 Patent includes the language "such leveling mechanisms are also insufficient to insure proper timing of the control and/or data signals received and/or transmitted by the memory modules." '506 Patent at 2:32-34. Samsung lacks knowledge or information sufficient to form a belief as to the truth of



the other allegations in Paragraph 20 of the First Amended Complaint, and therefore denies them.

21. To the extent that the allegations of Paragraph 21 set forth legal conclusions, no response is required. Samsung admits that the '506 Patent includes the language “[e]ach respective buffer circuit is configured to receive the module control signals and the module clock signal, and to buffer a respective set of data signals in response to the module control signals and the module clock signal. Each respective buffer circuit includes a delay circuit configured to delay the respective set of data signals by an amount determined based on at least one of the module control signals.” ’506 Patent at Abstract. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 21 of the First Amended Complaint, and therefore denies them.

22. To the extent that the allegations of Paragraph 22 set forth legal conclusions, no response is required. Samsung admits that the '506 Patent includes Figure 2A (modified in Paragraph 22 of the First Amended Complaint with Netlist annotations). Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 22 of the First Amended Complaint, and therefore denies them.

23. To the extent that the allegations of Paragraph 23 set forth legal conclusions, no response is required. Samsung admits that the '506 Patent includes the language “[b]ecause the isolation devices 118 are distributed across the memory module 110, during high speed operations, it may take more than one clock cycle time of the system clock MCK for the module control signals to travel along the module control signals lines 230 from the module control device 116 to the farthest positioned isolation devices 118, such as isolation device ID-1 and isolation device ID-(n-1) in the exemplary configuration shown in FIG. 2.” ’506 Patent at 9:52-

59. Samsung admits that the '506 Patent includes the language “each isolation devices includes signal alignment circuits that determine, during a write operation, a time interval between a time when one or more module control signals are received from the module control circuit 116 and a time when a write strobe or write data signal is received from the MCH 101. This time interval is used during a subsequent read operation to time the transmission of read data to the MCH 101, such that the read data follows a read command by a read latency value associated with the system 100 . . .” ’506 Patent at 10:11-20. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 23 of the First Amended Complaint, and therefore denies them.

#### **The '339 Patent**

24. To the extent that the allegations of Paragraph 24 set forth legal conclusions, no response is required. Samsung admits that the '339 Patent states, on its face, that it is entitled “Memory Module With Controlled Byte-Wise Buffers” and that it lists Hyun Lee and Jayesh R. Bhakta as inventors. Samsung further admits that the '339 Patent states, on its face, that it was filed as Application No. 15/470,856 on March 27, 2017, issued as a patent on March 16, 2021, and purports to claim priority to U.S. Patent Application No. 12/504,131 filed on July 16, 2009, U.S. Patent Application No. 12/761,179 filed on April 15, 2010, and U.S. Application No. 13/970,606 filed on August 20, 2013. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 24 of the First Amended Complaint, and therefore denies them.

25. To the extent that the allegations of Paragraph 25 set forth legal conclusions, no response is required. Samsung admits that Netlist alleged infringement of the '339 Patent in its Initial Complaint filed on December 20, 2021. Samsung denies the remaining allegations in Paragraph 25 of the First Amended Complaint.

26. To the extent that the allegations of Paragraph 26 set forth legal conclusions, no response is required. Samsung admits that the '339 Patent includes the language "consideration is always given to memory density, power dissipation (or thermal dissipation), speed, and cost." '339 Patent at 2:5-7. Samsung admits that the '339 Patent includes the language "[g]enerally, these attributes are not orthogonal to each other, meaning that optimizing one attribute may detrimentally affect another attribute. For example, increasing memory density typically causes higher power dissipation, slower operational speed, and higher costs." '339 Patent at 2:7-12. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 26 of the First Amended Complaint, and therefore denies them.

27. To the extent that the allegations of Paragraph 27 set forth legal conclusions, no response is required. Samsung admits that the '339 Patent includes the language "[t]he registered address and control signals selects one of the multiple ranks to perform the read or write operation. The module controller further outputs a set of module control signals in response to the input address and control signals. The memory module further comprises a plurality of byte-wise buffers controlled by the set of module control signals to actively drive respective byte-wise sections of each data signal associated with the read or write operation between the memory controller and the selected rank." '339 Patent at Abstract. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 27 of the First Amended Complaint, and therefore denies them.

28. To the extent that the allegations of Paragraph 28 set forth legal conclusions, no response is required. Samsung admits that the '339 Patent includes Figure 3A (modified in Paragraph 28 of the First Amended Complaint with Netlist annotations). Samsung lacks

knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 28 of the First Amended Complaint, and therefore denies them.

29. To the extent that the allegations of Paragraph 29 set forth legal conclusions, no response is required. Samsung admits that the '339 Patent includes the language “[r]eferring again to FIG. 3A, when the memory controller 420 executes read or write operations, each specific operation is targeted to a specific one of the ranks A, B, C, and D of a specific memory module 402. The data transmission circuit 416 on the specifically targeted one of the memory modules 402 functions as a bidirectional repeater/multiplexor, such that it drives the data signal when connecting from the system memory controller 420 to the memory devices 412. The other data transmission circuits 416 on the remaining memory modules 402 are disabled for the specific operation. . . . Thus, the memory controller 420, when there are four four-rank memory modules, sees four load-reducing switching circuit loads, instead of sixteen memory device loads. The reduced load on the memory controller 420 enhances the performance and reduces the power requirements of the memory system . . .” ’339 Patent at 17:14-42. Samsung admits that the '339 Patent includes the language “the data transmission circuit 416 comprises or functions as a byte-wise buffer. In certain such embodiments, each of the one or more transmission circuits 416 has the same bit width as does the associated memory devices 412 per rank to which the data transmission circuit 416 is operatively coupled.” ’339 Patent at 13:31-36. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 29 of the First Amended Complaint, and therefore denies them.

### **The '918 Patent**

30. To the extent that the allegations of Paragraph 30 set forth legal conclusions, no response is required. Samsung admits that the '918 Patent states, on its face, that it is entitled “Flash-DRAM Hybrid Memory Module” and that it lists Chi-She Chen, Jeffrey C. Solomon,

Scott H. Milton, and Jayesh Bhakta as inventors. Samsung further admits that the '918 Patent states, on its face, that it was filed as Application No. 17/138,766 on December 30, 2020, issued as a patent on May 25, 2021, and purports to claim priority to U.S. Application No. 15/934,416 filed on March 23, 2018, U.S. Application No. 14/840,865 filed on August 31, 2015, U.S. Application No. 14/489,269 filed on September 17, 2014, U.S. Application No. 13/559,476 filed on July 26, 2012, U.S. Application No. 12/240,916 filed on September 29, 2008, and U.S. Application No. 12/131,873 filed on June 2, 2008 as well as to two provisional applications, filed on June 1, 2007 (No. 60/941,586) and July 28, 2011 (No. 61/512,871). Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 30 of the First Amended Complaint, and therefore denies them.

31. To the extent that the allegations of Paragraph 31 set forth legal conclusions, no response is required. Samsung admits that Netlist alleged infringement of the '918 Patent in its Initial Complaint filed on December 20, 2021. Samsung denies the remaining allegations in Paragraph 31 of the First Amended Complaint.

32. To the extent that the allegations of Paragraph 32 set forth legal conclusions, no response is required. Samsung admits that the '918 Patent includes the language “[f]irst, second, and third buck converters receive a pre-regulated input voltage and produce first, second and third regulated voltages. A converter circuit reduces the pre-regulated input voltage to provide a fourth regulated voltage. Synchronous dynamic random access memory (SDRAM) devices are coupled to one or more regulated voltages of the first, second, third and fourth regulated voltages, and a voltage monitor circuit monitors an input voltage and produces a signal in response to the input voltage having a voltage amplitude that is greater than a threshold voltage.” '918 Patent at Abstract. Samsung lacks knowledge or information sufficient to form a belief as

to the truth of the other allegations in Paragraph 32 of the First Amended Complaint, and therefore denies them.

33. To the extent that the allegations of Paragraph 33 set forth legal conclusions, no response is required. Samsung admits that the '918 Patent includes Figure 16. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 33 of the First Amended Complaint, and therefore denies them.

34. To the extent that the allegations of Paragraph 34 set forth legal conclusions, no response is required. Samsung admits that the '918 Patent includes the language “[t]he power module 1100 provides a plurality of voltages to the memory system 1010 comprising non-volatile and volatile memory subsystems 1030, 1040. The plurality of voltages comprises at least a first voltage 1102 and a second voltage 1104. The power module 1100 comprises an input 1106 providing a third voltage 1108 to the power module 1100 and a voltage conversion element 1120 configured to provide the second voltage 1104 to the memory system 1010. The power module 1100 further comprises a first power element 1130 configured to selectively provide a fourth voltage 1110 to the conversion element 1120. In certain embodiments, the first power element 1130 comprises a pulse-width modulation power controller.” ’918 Patent at 28:3-15. Samsung admits that the '918 Patent includes the language “[t]he conversion element 1120 can comprise one or more buck converters and/or one or more buck-boost converters.” ’918 Patent at 29:18-19. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 34 of the First Amended Complaint, and therefore denies them.

35. To the extent that the allegations of Paragraph 35 set forth legal conclusions, no response is required. Samsung admits that the '054 Patent is a continuation of the '918 Patent.

Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 35 of the First Amended Complaint, and therefore denies them.

36. To the extent that the allegations of Paragraph 36 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 12 and includes the language “on-DIMM PMIC further boosts power management efficiency and power supply stability,” but Samsung denies that the language from the webpage that Netlist cites is complete, and on that basis denies the allegation. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 36 of the First Amended Complaint, and therefore denies them.

#### **The '054 Patent**

37. To the extent that the allegations of Paragraph 37 set forth legal conclusions, no response is required. Samsung admits that the '054 Patent states, on its face, that it is entitled “Flash-DRAM Hybrid Memory Module” and that it lists Chi-She Chen, Jeffrey C. Solomon, Scott H. Milton, and Jayesh Bhakta as inventors. Samsung further admits that the '054 Patent states, on its face, that it was filed as Application No. 17/328,019 on May 24, 2021, issued as a patent on January 25, 2022, and purports to claim priority to U.S. Application No. 17/138,766 filed on December 30, 2020, U.S. Application No. 15/934,416 filed on March 23, 2018, U.S. Application No. 14/840,865 filed on August 31, 2015, U.S. Application No. 14/489,269 filed on September 17, 2014, U.S. Application No. 13/559,476 filed on July 26, 2012, U.S. Application No. 12/240,916 filed on September 29, 2008, and U.S. Application No. 12/131,873 filed on June 2, 2008 as well as to two provisional applications, filed on June 1, 2007 (No. 60/941,586) and July 28, 2011 (No. 61/512,871). Samsung lacks knowledge or information sufficient to form a

belief as to the truth of the other allegations in Paragraph 37 of the First Amended Complaint, and therefore denies them.

38. To the extent that the allegations of Paragraph 38 set forth legal conclusions, no response is required. Samsung admits that Netlist's December 20, 2021 Initial Complaint referenced Application No. 17,138,019. Samsung admits that the '054 Patent states, on its face, that it issued on January 25, 2022. Samsung admits it moved to add the '054 Patent to the Delaware Declaratory Judgment Action. *See Samsung Electronics Co., Ltd., et al. v. Netlist, Inc.*, Case No. 1:21-cv-01453, Dkt. No. 19 at 7 (D. Del.) ("The proposed Second Amended Complaint would add a claim seeking a declaration that Samsung does not infringe the newly issued '054 patent."). Samsung denies any remaining allegations in Paragraph 38 of the First Amended Complaint.

39. To the extent that the allegations of Paragraph 39 set forth legal conclusions, no response is required. Samsung admits that the '054 Patent includes the language "[f]irst, second, and third buck converters receive a pre-regulated input voltage and produce first, second and third regulated voltages. A converter circuit reduces the pre-regulated input voltage to provide a fourth regulated voltage. Synchronous dynamic random access memory (SDRAM) devices are coupled to one or more regulated voltages of the first, second, third and fourth regulated voltages, and a voltage monitor circuit monitors an input voltage and produces a signal in response to the input voltage having a voltage amplitude that is greater than a threshold voltage." '054 Patent at Abstract. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 39 of the First Amended Complaint, and therefore denies them.



40. To the extent that the allegations of Paragraph 40 set forth legal conclusions, no response is required. Samsung admits that the '054 Patent includes Figure 16. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 40 of the First Amended Complaint, and therefore denies them.

41. To the extent that the allegations of Paragraph 41 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 41 of the First Amended Complaint.

**The '060 and '160 Patents**

42. To the extent that the allegations of Paragraph 42 set forth legal conclusions, no response is required. Samsung admits that the '060 Patent states, on its face, that it is entitled “Method and Apparatus for Optimizing Driver Load in a Memory Package” and that it lists Hyun Lee as the sole inventor. Samsung further admits that the '060 Patent states, on its face, that it was filed as Application No. 13/288,850 on November 3, 2011, issued as a patent on July 22, 2014, and purports to claim priority to a provisional application filed on November 3, 2010 (U.S. Application No. 61/409,893). Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 42 of the First Amended Complaint, and therefore denies them.

43. To the extent that the allegations of Paragraph 43 set forth legal conclusions, no response is required. Samsung admits that the '160 Patent states, on its face, that it is a continuation of the '060 patent, that it is entitled “Memory Package with Optimized Driver Load and Method of Operation,” and that it lists Hyun Lee as the sole inventor. Samsung further admits that the '160 Patent states, on its face, that it was filed as Application No. 14/337,168 on July 21, 2014, issued as a patent on April 19, 2016, and purports to claim priority to U.S. Application No. 13/288,850 (which issued as the '060 patent) and a provisional application filed

on November 3, 2010 (U.S. Application No. 61/409,893). Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 43 of the First Amended Complaint, and therefore denies them.

44. To the extent that the allegations of Paragraph 44 set forth legal conclusions, no response is required. Samsung admits that Netlist alleges infringement of the '060 and '160 Patents in its First Amended Complaint. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 44 of the First Amended Complaint, and therefore denies them.

45. To the extent that the allegations of Paragraph 45 set forth legal conclusions, no response is required. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 45 of the First Amended Complaint, and therefore denies them.

46. To the extent that the allegations of Paragraph 46 set forth legal conclusions, no response is required. Samsung admits that the '060 and '160 Patents include the language “[t]he first die interconnect is in electrical communication with a data port of a first array die and a data port of a second array die and not in electrical communication with data ports of a third array die. The second die interconnect is in electrical communication with a data port of the third array die and not in electrical communication with data ports of the first array die and the second array die. The apparatus includes a control die that includes a first data conduit configured to transmit a data signal to the first die interconnect and not to the second die interconnect, and at least a second data conduit configured to transmit the data signal to the second die interconnect and not to the first die interconnect.” ’060 Patent at Abstract; ’160 Patent at Abstract. Samsung lacks

knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 46 of the First Amended Complaint, and therefore denies them.

47. To the extent that the allegations of Paragraph 47 set forth legal conclusions, no response is required. Samsung admits that the '060 and '160 Patents both include Figure 2 and that Figure 2 is identical in each patent. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 47 of the First Amended Complaint, and therefore denies them.

48. To the extent that the allegations of Paragraph 48 set forth legal conclusions, no response is required. Samsung admits that the '060 and '160 Patents include the language “[e]ach of these die interconnects 320 may be coupled to, or in electrical communication with at least one port of at least one of the array dies 310. As with the memory package 200, in certain embodiments, at least one of the die interconnects 320 is in electrical communication with at least one port from each of at least two array dies 310 without being in electrical communication with a port from at least one array die 310, which may be in electrical communication with a different die interconnect 320.” ’060 Patent at 5:54-62; ’160 Patent at 5:57-65. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 48 of the First Amended Complaint, and therefore denies them.

### **Samsung’s Activities<sup>2</sup>**

49. To the extent that the allegations of Paragraph 49 set forth legal conclusions, no response is required. Samsung admits certain subsidiaries of SEC manufacture semiconductor memory products such as DRAM, NAND Flash, MCP (Multi-Chip Package), and high-bandwidth memories (“HBM”). Samsung admits that certain Samsung entities make memory

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<sup>2</sup> Samsung denies the allegation contained in the header preceding Paragraph 49.

components and memory modules designed for, among other things, use in servers such as those supporting cloud-based computing and other applications. Samsung denies that SEC and SSI make the Accused Instrumentalities in the State of Texas or the Eastern District of Texas. Samsung denies that SEA makes or sells the Accused Instrumentalities in the State of Texas or the Eastern District of Texas. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 49 of the First Amended Complaint, and therefore denies them.

50. To the extent that the allegations of Paragraph 50 set forth legal conclusions, no response is required. Samsung admits that Samsung filed a declaratory judgment action in the District of Delaware and that Netlist moved to dismiss each count of Samsung's original complaint in Delaware. However, Netlist's motion to dismiss each count of Samsung's original complaint was dismissed as moot because Samsung's original complaint is no longer operative. *See Samsung Electronics Co., Ltd., et al. v. Netlist, Inc.*, Case No. 1:21-cv-01453, Dkt. No. 17 (D. Del.). This is because Samsung filed its First Amended Complaint on January 18, 2022. *See Samsung Electronics Co., Ltd., et al. v. Netlist, Inc.*, Case No. 1:21-cv-01453, Dkt. No. 14 (D. Del.). Netlist moved to dismiss each count of Samsung's First Amended Complaint on February 16, 2022. *Samsung Electronics Co., Ltd., et al. v. Netlist, Inc.*, Case No. 1:21-cv-01453, Dkt. No. 25 at 5 (D. Del.). Samsung further admits that the 2015 Joint Development License Agreement ("JDLA") granted Samsung a paid-up license to Netlist patents. Samsung admits that Samsung was a licensee of Netlist until at least July 15, 2020. Samsung admits that on October 14, 2021, a Federal District Court in the Central District of California issued an order finding that the effective termination date of the JDLA was July 15, 2020. *See Netlist Inc. v. Samsung Elecs. Co., Ltd.*, No. 20-cv-993, Dkt. No. 186 at 20-21 (C.D. Cal.). Samsung admits that on February

15, 2022, the Central District Court entered judgment in favor of Netlist on its three contract claims. *Id.* at Dkt. No. 306. Samsung further admits that on February 25, 2022, SEC appealed the judgment entered by the Central District Court to the Ninth Circuit. *Id.* at Dkt. No. 309. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 50 of the First Amended Complaint, and therefore denies them.

51. To the extent that the allegations of Paragraph 51 set forth legal conclusions, no response is required. Samsung admits that on February 15, 2022, the Central District Court entered judgment in favor of Netlist on its three contract claims. *See Netlist Inc. v. Samsung Electronics Co., Ltd.*, No. 8:20-cv-00993-MCS, Dkt. No. 306 (C.D. Cal. Feb 15, 2022). Samsung further admits that on February 25, 2022, SEC appealed the judgment entered by the Central District Court to the Ninth Circuit. *Id.* at Dkt. No. 309. Samsung denies any remaining allegations of Paragraph 51.

52. To the extent that the allegations of Paragraph 52 set forth legal conclusions, no response is required. Samsung admits that in regards to the third claim for declaratory relief, Judge Scarsi stated that “Netlist terminated the JDLA pursuant to JDLA § 13.2, and Samsung’s licenses and rights under the JDLA have ceased.” *Id.* at 2. Samsung further admits that on February 25, 2022, SEC appealed the judgment entered by the Central District Court to the Ninth Circuit. *Id.* at Dkt. No. 309. Samsung denies any remaining allegations of Paragraph 52.

53. To the extent that the allegations of Paragraph 53 set forth legal conclusions, no response is required. Samsung admits that after the entry of judgment in the Central District of California, it answered Netlist’s Initial Complaint. Samsung denies any remaining allegations of Paragraph 53.

#### **DDR4 Memory Modules**

54. To the extent that the allegations of Paragraph 54 set forth legal conclusions, no response is required. Samsung admits that certain Samsung entities make DDR4 LRDIMMs, DDR5 RDIMMs, DDR5 SODIMMs, and DDR5 UDIMMs. Samsung denies that SEC and SSI make the Accused Instrumentalities in the State of Texas or the Eastern District of Texas. Samsung denies that SEA makes or sells the Accused Instrumentalities. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 54 of the First Amended Complaint, and therefore denies them.

55. To the extent that the allegations of Paragraph 55 set forth legal conclusions, no response is required. Samsung admits that certain Samsung entities make certain DDR4 products. Samsung further admits that Samsung lists DDR4 LRDIMM products on its website. Samsung denies that SEC and SSI make the Accused Instrumentalities in the State of Texas or the Eastern District of Texas. Samsung denies that SEA makes or sells the Accused Instrumentalities. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 55 of the First Amended Complaint, and therefore denies them.

#### **DDR5 Memory Modules**

56. To the extent that the allegations of Paragraph 56 set forth legal conclusions, no response is required. Samsung admits that certain Samsung entities make certain DDR5 products. Samsung denies that SEC and SSI make the Accused Instrumentalities in the State of Texas or the Eastern District of Texas. Samsung denies that SEA makes or sells the Accused Instrumentalities. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 56 of the First Amended Complaint, and therefore denies them.

57. To the extent that the allegations of Paragraph 57 set forth legal conclusions, no response is required. Samsung admits that purported copies of Samsung brochures are attached to the First Amended Complaint as Exhibits 17 and 18 and purport to show certain Samsung power management products that “fully support[] [the] JEDEC standard.” Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 57 of the First Amended Complaint, and therefore denies them.

58. To the extent that the allegations of Paragraph 58 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung press release publicized on October 12, 2021 is attached to the First Amended Complaint as Exhibit 8 and purports to show certain DDR5 products. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 58 of the First Amended Complaint, and therefore denies them.

59. To the extent that the allegations of Paragraph 59 set forth legal conclusions, no response is required. Samsung admits that a purported picture of Samsung DDR5 RDIMM is shown in Paragraph 59 of the First Amended Complaint. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 59 of the First Amended Complaint, and therefore denies them.

60. To the extent that the allegations of Paragraph 60 set forth legal conclusions, no response is required. Samsung admits that a purported picture of Samsung DDR5 UDIMM is shown in Paragraph 60 of the First Amended Complaint. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 60 of the First Amended Complaint, and therefore denies them.

**High Bandwidth Memory (“HBM”)**

61. To the extent that the allegations of Paragraph 61 set forth legal conclusions, no response is required. Samsung admits that HBM is a type of memory technology. Samsung admits that certain Samsung entities make HBM products. Samsung denies that SEA makes or sells the Accused Instrumentalities. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 20 and includes the phrase “optimized for high-performance computing (HPC), and offer the performance needed to power next-generation technologies, such as artificial intelligence (AI).” Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 61 of the First Amended Complaint, and therefore denies them.

62. To the extent that the allegations of Paragraph 62 set forth legal conclusions, no response is required. Samsung admits that Samsung lists HBM products on its website. Samsung admits that a purported picture of Samsung HBM2 Flarebolt is shown in Paragraph 62 of the First Amended Complaint. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 62 of the First Amended Complaint, and therefore denies them.

63. To the extent that the allegations of Paragraph 63 set forth legal conclusions, no response is required. Samsung admits that Samsung lists HBM products on its website. Samsung admits that a purported picture of Samsung HBM2 Aquabolt is shown in Paragraph 63 of the First Amended Complaint. Samsung further admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 21 and includes the phrase “[t]o achieve HBM2 Aquabolt’s unprecedented performance, Samsung has applied new technologies related to TSV design and thermal control. A single 8GB HBM2 package consists of eight 8Gb HBM2 dies, which are vertically interconnected using over 5,000 TSVs (Through Silicon Via’s)



per die. While using so many TSVs can cause collateral clock skew, Samsung succeeded in minimizing the skew to a very modest level and significantly enhancing chip performance in the process.” Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 63 of the First Amended Complaint, and therefore denies them.

64. To the extent that the allegations of Paragraph 64 set forth legal conclusions, no response is required. Samsung admits that Samsung lists HBM products on its website. Samsung admits that purported pictures relating to Samsung HBM2E Flashbolt are shown in Paragraph 64 of the First Amended Complaint. Samsung lacks knowledge or information sufficient to form a belief as to the truth of the other allegations in Paragraph 64 of the First Amended Complaint, and therefore denies them

**FIRST CLAIM FOR RELIEF – ’506 PATENT**

65. Samsung incorporates by reference its responses to paragraphs 1-64 of the First Amended Complaint.

66. To the extent that the allegations of Paragraph 66 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 66 of the First Amended Complaint.

67. To the extent that the allegations of Paragraph 67 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 19. Samsung denies the allegations in Paragraph 67 of the First Amended Complaint.

68. To the extent that the allegations of Paragraph 68 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 19 and includes the phrases “a register for enhancing

clock, command and control signals” and “[e]nhanced data signal.” Samsung admits that a purported copy of a Samsung M386AAK40B40 Datasheet is attached to the First Amended Complaint as Exhibit 7. Samsung denies the remaining allegations in Paragraph 68 of the First Amended Complaint.

69. To the extent that the allegations of Paragraph 69 set forth legal conclusions, no response is required. Samsung admits that purported copies of a Samsung webpage and a Samsung M386AAK40B40 Datasheet are attached to the First Amended Complaint as Exhibits 19 and 7, respectively. Samsung denies the remaining allegations in Paragraph 69 of the First Amended Complaint.

70. To the extent that the allegations of Paragraph 70 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung M386AAK40B40 Datasheet is attached to the First Amended Complaint as Exhibit 7. Samsung denies the remaining allegations in Paragraph 70 of the First Amended Complaint.

71. To the extent that the allegations of Paragraph 71 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung M386AAK40B40 Datasheet is attached to the First Amended Complaint as Exhibit 7 (modified in Paragraph 71 of the First Amended Complaint with Netlist annotations). Samsung denies the remaining allegations in Paragraph 71 of the First Amended Complaint.

72. To the extent that the allegations of Paragraph 72 set forth legal conclusions, no response is required. Samsung admits that purported copies of a Samsung M386AAK40B40 Datasheet and portions of the JEDEC JESD82-32A Standard are attached to the First Amended Complaint as Exhibits 7 and 9, respectively. Samsung denies the remaining allegations in Paragraph 72 of the First Amended Complaint.

73. To the extent that the allegations of Paragraph 73 set forth legal conclusions, no response is required. Samsung admits that purported copies of a Samsung webpage and a Samsung M386AAK40B40 datasheet are attached to the First Amended Complaint as Exhibits 19 and 7 (all modified in Paragraph 73 of the First Amended Complaint with Netlist annotations), respectively. Samsung denies the remaining allegations in Paragraph 73 of the First Amended Complaint.

74. To the extent that the allegations of Paragraph 74 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung M386AAK40B40 Datasheet is attached to the First Amended Complaint as Exhibit 7 (modified in Paragraph 74 of the First Amended Complaint with Netlist annotations). Samsung denies the remaining allegations in Paragraph 74 of the First Amended Complaint.

75. To the extent that the allegations of Paragraph 75 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 75 of the First Amended Complaint.

76. To the extent that the allegations of Paragraph 76 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 76 of the First Amended Complaint.

77. To the extent that the allegations of Paragraph 77 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 77 of the First Amended Complaint.

**SECOND CLAIM FOR RELIEF – '339 PATENT**

78. Samsung incorporates by reference its responses to paragraphs 1-77 of the First Amended Complaint.

79. To the extent that the allegations of Paragraph 79 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 79 of the First Amended Complaint.

80. To the extent that the allegations of Paragraph 80 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 19 and includes the phrases “a register for enhancing clock, command and control signals” and “[e]nhanced data signal.” Samsung denies the remaining allegations in Paragraph 80 of the First Amended Complaint.

81. To the extent that the allegations of Paragraph 81 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung M386AAK40B40 Datasheet is attached to the First Amended Complaint as Exhibit 7. Samsung denies the remaining allegations in Paragraph 81 of the First Amended Complaint.

82. To the extent that the allegations of Paragraph 82 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 19 (modified in Paragraph 82 of the First Amended Complaint with Netlist annotations). Samsung denies the remaining allegations in Paragraph 82 of the First Amended Complaint.

83. To the extent that the allegations of Paragraph 83 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 83 of the First Amended Complaint.

84. To the extent that the allegations of Paragraph 84 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung M386AAK40B40

Datasheet is attached to the First Amended Complaint as Exhibit 7. Samsung denies the remaining allegations in Paragraph 84 of the First Amended Complaint.

85. To the extent that the allegations of Paragraph 85 set forth legal conclusions, no response is required. Samsung admits that purported copies of a Samsung M386AAK40B40 Datasheet and portions of the JEDEC JESD79-4C Standard are attached to the First Amended Complaint as Exhibits 7 and 10 (Exhibit 7 modified in Paragraph 85 of the First Amended Complaint with Netlist annotations), respectively. Samsung denies the remaining allegations in Paragraph 85 of the First Amended Complaint.

86. To the extent that the allegations of Paragraph 86 set forth legal conclusions, no response is required. Samsung admits that a purported copy of portions of the JEDEC 21C Standard is attached to the First Amended Complaint as Exhibit 11 (modified in Paragraph 86 of the First Amended Complaint with Netlist annotations). Samsung denies the remaining allegations in Paragraph 86 of the First Amended Complaint.

87. To the extent that the allegations of Paragraph 87 set forth legal conclusions, no response is required. Samsung admits that a purported copy of portions of the JEDEC JESD82-32A Standard is attached to the First Amended Complaint as Exhibit 9 (modified in Paragraph 87 of the First Amended Complaint with Netlist annotations). Samsung denies the remaining allegations in Paragraph 87 of the First Amended Complaint.

88. To the extent that the allegations of Paragraph 88 set forth legal conclusions, no response is required. Samsung admits that a purported copy of portions of the JEDEC JESD82-32A Standard is attached to the First Amended Complaint as Exhibit 9. Samsung denies the remaining allegations in Paragraph 88 of the First Amended Complaint.

89. To the extent that the allegations of Paragraph 89 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 89 of the First Amended Complaint.

90. To the extent that the allegations of Paragraph 90 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 90 of the First Amended Complaint.

91. To the extent that the allegations of Paragraph 91 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 91 of the First Amended Complaint.

**THIRD CLAIM FOR RELIEF – '918 PATENT**

92. Samsung incorporates by reference its responses to paragraphs 1-91 of the First Amended Complaint.

93. To the extent that the allegations of Paragraph 93 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 93 of the First Amended Complaint.

94. To the extent that the allegations of Paragraph 94 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 5 (modified in Paragraph 94 of the First Amended Complaint with Netlist annotations). Samsung admits that purported pictures of Samsung DDR5 RDIMM and DDR5 UDIMM are shown in Paragraph 94 of the First Amended Complaint. Samsung denies the remaining allegations in Paragraph 94 of the First Amended Complaint.

95. To the extent that the allegations of Paragraph 95 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 12 and includes the phrase “on-DIMM PMIC further

boosts power management efficiency and power supply stability.” Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 13 and includes the following language: “[o]ne major design improvement to the newest generation DRAM solution involves integrating the PMIC into the memory module – previous generations placed the PMIC on the motherboard – offering increased compatibility and signal integrity, and providing a more reliable and sustained performance.” Samsung denies the remaining allegations in Paragraph 95 of the First Amended Complaint.

96. To the extent that the allegations of Paragraph 96 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 13 and includes the phrase “allows the DC voltage to step down from high to low with a fast transient response to changes in the output load current and adapts the conversion accordingly to efficiently regulate its output voltage at near-constant levels.” Samsung denies the remaining allegations in Paragraph 96 of the First Amended Complaint.

97. To the extent that the allegations of Paragraph 97 set forth legal conclusions, no response is required. Samsung admits that a purported copy of portions of the JEDEC JESD301-1 Power Management Specification is attached to the First Amended Complaint as Exhibit 14 (modified in Paragraph 97 of the First Amended Complaint with Netlist annotations), respectively. Samsung denies the remaining allegations in Paragraph 97 of the First Amended Complaint.

98. To the extent that the allegations of Paragraph 98 set forth legal conclusions, no response is required. Samsung admits that purported copies of a Samsung webpage, portions of the JEDEC JESD79-5 Standard, and portions of the JEDEC JESD82-511 Standard are attached

to the First Amended Complaint as Exhibits 8, 15 and 16 (all modified in Paragraph 98 of the First Amended Complaint), respectively. Samsung denies the remaining allegations in Paragraph 98 of the First Amended Complaint.

99. To the extent that the allegations of Paragraph 99 set forth legal conclusions, no response is required. Samsung admits that a purported copy of portions of the JEDEC JESD82-511 Standard is attached to the First Amended Complaint as Exhibit 16. Samsung denies the remaining allegations in Paragraph 99 of the First Amended Complaint.

100. To the extent that the allegations of Paragraph 100 set forth legal conclusions, no response is required. Samsung admits that a purported copy of portions of the JEDEC JESD82-511 Standard is attached to the First Amended Complaint as Exhibit 16 (modified in Paragraph 100 of the First Amended Complaint with Netlist annotations). Samsung denies the remaining allegations in Paragraph 100 of the First Amended Complaint.

101. To the extent that the allegations of Paragraph 101 set forth legal conclusions, no response is required. Samsung admits that a purported picture of voltmeters is shown in Paragraph 101 of the First Amended Complaint. Samsung denies the remaining allegations in Paragraph 101 of the First Amended Complaint.

102. To the extent that the allegations of Paragraph 102 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 102 of the First Amended Complaint.

103. To the extent that the allegations of Paragraph 103 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 103 of the First Amended Complaint.



104. To the extent that the allegations of Paragraph 104 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 104 of the First Amended Complaint.

**FOURTH CLAIM FOR RELIEF – '054 PATENT**

105. Samsung incorporates by reference its responses to paragraphs 1-104 of the First Amended Complaint.

106. To the extent that the allegations of Paragraph 106 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 106 of the First Amended Complaint.

107. To the extent that the allegations of Paragraph 107 set forth legal conclusions, no response is required. Samsung admits that purported pictures relating to Samsung DDR5 UDIMM and RDIMM are shown in Paragraph 107 of the First Amended Complaint. Samsung denies the remaining allegations in Paragraph 107 of the First Amended Complaint

108. To the extent that the allegations of Paragraph 108 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 12 and includes the phrase “on-DIMM PMIC further boosts power management efficiency and power supply stability.” Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 13 and includes the following language: “[o]ne major design improvement to the newest generation DRAM solution involves integrating the PMIC into the memory module – previous generations placed the PMIC on the motherboard – offering increased compatibility and signal integrity, and providing a more reliable and sustained performance.” Samsung denies the remaining allegations in Paragraph 108 of the First Amended Complaint.

109. To the extent that the allegations of Paragraph 109 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung webpage is attached to the First Amended Complaint as Exhibit 13 and includes the following language: “allows the DC voltage to step down from high to low with a fast transient response to changes in the output load current and adapts the conversion accordingly to efficiently regulate its output voltage at near-constant levels.” Samsung admits that purported pictures relating to Samsung DDR5 UDIMM and RDIMM are shown in Paragraph 109 of the First Amended Complaint. Samsung denies the remaining allegations in Paragraph 109 of the First Amended Complaint.

110. To the extent that the allegations of Paragraph 110 set forth legal conclusions, no response is required. Samsung admits that purported pictures of voltmeters are shown in Paragraph 110 of the First Amended Complaint. Samsung denies the remaining allegations in Paragraph 110 of the First Amended Complaint.

111. To the extent that the allegations of Paragraph 111 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 111 of the First Amended Complaint.

112. To the extent that the allegations of Paragraph 112 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 112 of the First Amended Complaint.

113. To the extent that the allegations of Paragraph 113 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 113 of the First Amended Complaint.

114. To the extent that the allegations of Paragraph 114 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 114 of the First Amended Complaint.

115. To the extent that the allegations of Paragraph 115 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 115 of the First Amended Complaint.

116. To the extent that the allegations of Paragraph 116 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 116 of the First Amended Complaint.

**FIFTH CLAIM FOR RELIEF – '060 PATENT**

117. Samsung incorporates by reference its responses to paragraphs 1-116 of the First Amended Complaint.

118. To the extent that the allegations of Paragraph 118 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 118 of the First Amended Complaint.

119. To the extent that the allegations of Paragraph 119 set forth legal conclusions, no response is required. Samsung admits that a purported picture of dies is shown in Paragraph 119 of the First Amended Complaint. Samsung denies the remaining allegations in Paragraph 119 of the First Amended Complaint.

120. To the extent that the allegations of Paragraph 120 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 120 of the First Amended Complaint.

121. To the extent that the allegations of Paragraph 121 set forth legal conclusions, no response is required. Samsung admits that a purported copy of a Samsung white paper is

attached to the First Amended Complaint as Exhibit 22. Samsung denies the allegations in Paragraph 121 of the First Amended Complaint.

122. To the extent that the allegations of Paragraph 122 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 122 of the First Amended Complaint.

123. To the extent that the allegations of Paragraph 123 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 123 of the First Amended Complaint.

124. To the extent that the allegations of Paragraph 124 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 124 of the First Amended Complaint.

125. To the extent that the allegations of Paragraph 125 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 125 of the First Amended Complaint.

126. To the extent that the allegations of Paragraph 126 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 126 of the First Amended Complaint.

**SIXTH CLAIM FOR RELIEF – '160 PATENT**

127. Samsung incorporates by reference its responses to paragraphs 1-126 of the First Amended Complaint.

128. To the extent that the allegations of Paragraph 128 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 128 of the First Amended Complaint.

129. To the extent that the allegations of Paragraph 129 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 129 of the First Amended Complaint.

130. To the extent that the allegations of Paragraph 130 set forth legal conclusions, no response is required. Samsung admits that a purported picture of dies is shown in Paragraph 130 of the First Amended Complaint. Samsung denies the remaining allegations in Paragraph 130 of the First Amended Complaint.

131. To the extent that the allegations of Paragraph 131 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 131 of the First Amended Complaint.

132. To the extent that the allegations of Paragraph 132 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 132 of the First Amended Complaint.

133. To the extent that the allegations of Paragraph 133 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 133 of the First Amended Complaint.

134. To the extent that the allegations of Paragraph 134 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 134 of the First Amended Complaint.

135. To the extent that the allegations of Paragraph 135 set forth legal conclusions, no response is required. Samsung denies the allegations in Paragraph 135 of the First Amended Complaint

**DEMAND FOR JURY TRIAL**

136. Samsung admits that Netlist demands a trial by jury, and Samsung likewise demands a trial by jury on all issues so triable. Samsung denies the remaining allegations in Paragraph 136 of the First Amended Complaint.

**[NETLIST'S] PRAYER FOR RELIEF**

Samsung denies the underlying allegations of Netlist's Prayer for Relief against Samsung, denies that Netlist is entitled to any relief whatsoever, and requests that the Court deny all relief to Netlist, enter judgment in favor of Samsung, and award Samsung their attorney's fees as the prevailing party in the action.

**GENERAL DENIAL**

To the extent that any allegations of the First Amended Complaint have not been previously specifically admitted or denied, Samsung denies them.

**SAMSUNG'S ADDITIONAL DEFENSES**

Pursuant to Federal Rule of Civil Procedure 8(c), Samsung, without waiver, limitation or prejudice, hereby asserts the additional defenses listed below. Samsung reserves the right to amend this Answer to add additional defenses, including allegations of inequitable conduct, and/or any other defenses currently unknown to Samsung as they become known throughout the course of discovery in this action. Assertion of a defense is not a concession that Samsung has the burden of proving the matter asserted.

**FIRST ADDITIONAL DEFENSE**  
**(Non-Infringement)**

Samsung does not infringe and has not infringed, under any theory of infringement, including directly (whether individually or jointly) or indirectly (whether contributorily or by

inducement), any valid, enforceable claim of the Patents-In-Suit, either literally or under the Doctrine of Equivalents, and has not committed any acts in violation of 35 U.S.C. § 271.

**SECOND ADDITIONAL DEFENSE**  
**(Invalidity)**

Each asserted claim of the Patents-In-Suit is invalid for failure to comply with one or more of the requirements of United States Code, Title 35, including, without limitation, 35 U.S.C. §§ 101, 102, 103, and/or 112, and the rules, regulations, and laws pertaining thereto.

**THIRD ADDITIONAL DEFENSE**  
**(Laches, Estoppel, and/or Waiver)**

Netlist's attempted enforcement of the Patents-In-Suit against Samsung is barred by laches, estoppel, and/or waiver. For example, to the extent the Patents-In-Suit are essential to one or more JEDEC standards, Netlist is estopped from enforcing the Patents-In-Suit against Samsung because its failure to comply with its RAND obligations. As another example, to the extent the Patents-In-Suit are essential to one or more JEDEC standards, Netlist is estopped from seeking an injunction or lost profits by its RAND obligations.

**FOURTH ADDITIONAL DEFENSE**  
**(Prosecution History Estoppel)**

Netlist's claims are barred by the doctrine of prosecution history estoppel and/or disclaimer based on statements, representations, and admissions made during prosecution of the patent applications resulting in the Patents-In-Suit.

**FIFTH ADDITIONAL DEFENSE**  
**(Failure to State a Claim)**

Netlist's First Amended Complaint fails to state a claim upon which relief can be granted.

**SIXTH ADDITIONAL DEFENSE**  
**(Lack of Standing)**

Netlist does not have standing to assert the Patents-In-Suit against Samsung.

**SEVENTH ADDITIONAL DEFENSE**  
**(Marking)**

Any claim for damages by Netlist is limited by its failure to mark, including without limitation, to the extent Netlist contends there are products covered by the Patents-In-Suit, Netlist's failure to mark its own products with the numbers of the Patents-In-Suit and/or its failure to require and/or police the marking of Netlist's customers and licensees.

**EIGHTH ADDITIONAL DEFENSE**  
**(Notice, Damages, and Costs)**

Netlist's claims for damages are statutorily limited under 35 U.S.C. §§ 286 and 287. Netlist is barred from recovering costs in connection with this action under 35 U.S.C. § 288. Netlist's claims for relief are limited by the doctrines of full compensation, exhaustion, and/or first sale, and Netlist is not entitled to a double recovery. For example, to the extent the Patents-In-Suit are essential to one or more JEDEC standards, Netlist is barred from seeking lost profits by its RAND obligations.

**NINTH ADDITIONAL DEFENSE**  
**(License Express or Implied and/or Patent Exhaustion)**

Netlist's claims are barred in whole or in part by express or implied license and/or patent exhaustion.

For example, on November 12, 2015, Netlist and SEC entered into a Joint Development and License Agreement (the "Agreement"). The Agreement contains cross-license, joint development, and product supply provisions.

In the Agreement, Netlist granted SEC and its subsidiaries, including SSI, a perpetual, paid-up, worldwide, non-exclusive license to all patents owned or controlled by Netlist or any of



its subsidiaries having an effective first filing date on or prior to November 12, 2020. The license extends through the expiration of the last to expire of the licensed patents.

SEC similarly granted Netlist and its subsidiaries a perpetual, paid-up, worldwide, non-exclusive license to all patents owned or controlled by SEC or any of its subsidiaries having an effective first filing date on or prior to November 12, 2020.

The Agreement required SEC to make a payment to Netlist of \$8 million subject to the terms and conditions therein. SEC made this payment to Netlist except for a portion that was remitted as tax withholding to the Korean tax authorities, which later refunded the withheld portion to Netlist.

Netlist is now taking extraordinary actions to back out of its grant of a patent license to Samsung.

On May 27, 2020, Netlist's Chief Licensing Officer, Marc J. Frechette, wrote to Mr. Seung Min Sung of SEC, and alleged that Samsung materially breached the Agreement by allegedly "repeatedly fail[ing] to fulfill Netlist's request for NAND and DRAM products throughout the term of the Agreement" and, allegedly, by improperly deducting withholding taxes. Netlist did not allege, and has never alleged, that Samsung breached the Agreement in any way related to the patent cross-license. In the same letter—which was the first time Netlist raised its breach allegations—Mr. Frechette informed Mr. Sung that Netlist had filed a complaint in U.S. District Court for the Central District of California with respect to the alleged breach by Samsung and provided a copy of the complaint for reference.

On May 28, 2020, the U.S. District Court for the Central District of California docketed Netlist's breach of contract complaint against SEC. *Netlist Inc. v. Samsung Electronics Co., Ltd.*, No. 8:20-cv-00993-MCS (C.D. Cal.) ("Breach Action").

Netlist subsequently wrote to SEC to terminate the Agreement, including the patent license to SEC and its subsidiaries. On July 15, 2020, Netlist's Chief Licensing Officer, Marc J. Frechette, wrote to Mr. Seung Min Sung of SEC and stated that "Netlist is hereby terminating, effective immediately, the Agreement including the patent license granted to Samsung . . . ."

One week later, on July 22, 2020, Netlist amended its complaint in the Breach Action, seeking a declaration that the license it granted Samsung, *but not the license Samsung granted Netlist*, is terminated. In the Breach Action, Netlist seeks monetary damages and a declaration "that Netlist has terminated the Agreement pursuant to Section 13.2 and that Samsung's licenses and rights under the agreement have ceased."

On October 14, 2021, the court in the Breach Action issued a confidential order granting summary judgment in favor of Netlist on Netlist's Third Claim for Relief, which seeks a declaration that Netlist terminated Samsung's license effective July 20, 2020. *See Netlist Inc. v. Samsung Electronics Co., Ltd.*, No. 8:20-cv-00993-MCS, Dkt. No. 186 (C.D. Cal.). The court also granted summary judgment in Netlist's favor that Samsung was liable for certain alleged breaches of other provisions in the Agreement. *See id.*

Beginning on December 1, 2021, the court in the Breach Action held a jury trial on damages for one of the alleged breaches (the alleged failure to fulfill Netlist's orders for NAND and DRAM products). On December 3, 2021, the jury returned a verdict in Samsung's favor, finding that Netlist failed to prove that it suffered any damages for this alleged breach. *See Breach Action*, Dkt. No. 276.

On January 10, 2022, Samsung filed a motion for entry of judgment in Samsung's favor as to Netlist's First and Second Claims for Relief and, as to Netlist's Third Claim for Relief, for entry of judgment in Samsung's favor or, in the alternative, a trial on the claim. On February 15,

2022, the Court in the Breach Action entered judgment in favor of Netlist on the First and Second Claims for Relief and awarded nominal damages in the amount of \$1.00 for each claim. *See* Breach Action, Dkt. No. 306. Further, the Court entered judgment in favor of Netlist on the Third Claim for declaratory relief finding that Netlist terminated the Agreement and that Samsung's licenses and rights under the Agreement have ceased. *See id.*

On February 25, 2022, SEC appealed the judgment entered in the Breach Action to the Ninth Circuit. *See* Breach Action, Dkt. No. 309. SEC maintains that it did not breach the Agreement, that the Agreement has not been terminated, and that it continues to hold a paid-up, worldwide, non-exclusive license to Netlist's patents, including the Patents-In-Suit. Further, regardless of whether the Agreement was properly terminated (which Samsung disputes), Samsung, its customers, and its end users are not liable for infringement of the Patents-In-Suit for any memory modules made, used, sold, offered for sale, or imported before July 20, 2020, the date of which the purported termination became effective.

**TENTH ADDITIONAL DEFENSE**  
**(Not an Exceptional Case)**

Netlist is not entitled to a finding that this case is exceptional warranting attorneys' fees under 35 U.S.C. § 285, or pursuant to the Court's inherent power.

**ELEVENTH ADDITIONAL DEFENSE**  
**(No Willful Infringement)**

Netlist's claims for enhanced damages, if any, and an award of fees and costs against Samsung have no basis in fact or law and should be denied.

**TWELFTH ADDITIONAL DEFENSE**  
**(Prosecution laches)**

Netlist's attempted enforcement of the Patents-In-Suit against Samsung is barred by prosecution laches.

**THIRTEENTH ADDITIONAL DEFENSE**  
**(Inequitable Conduct and Unclean Hands)**

Individuals substantively involved in the prosecution of the '506 patent knew about material and non-cumulative prior art by virtue of their participation in JEDEC standards meetings. On information and belief, these individuals specifically intended to deceive the Patent Office into believing that the claims of the '506 patent were patentable by withholding the relevant art from the examiner during prosecution of the patent.

**1. Background on the Alleged Invention, and the Prosecution of the '506 Patent, and Events Occurring During the Same**

The '506 patent issued from a series of continuation applications: U.S. Patent Application Nos. 15/820,076 (U.S. Patent No. 10,268,608); 15/426,064 (U.S. Patent No. 9,824,035); 14/846,993 (U.S. Patent No. 9,563,587); and 13/952,599 (U.S. Patent No. 9,128,632). This chain of continuation applications ultimately claims priority to U.S. Provisional Patent Application No. 61/676,883, which was filed on July 27, 2012. All of the applications name Hyun Lee and Jayesh R. Bhakta as the inventors.

The '506 patent incorporates by reference a number of Netlist's other patent applications including U.S. Patent Application Nos. 14/715,486 (U.S. Patent No. 9,858,821); 13/970,606 (U.S. Patent No. 9,606,907); 12/504,131 (U.S. Patent No. 8,417,870); 12/761,179 (U.S. Patent No. 8,516,185); 13/287,042 (U.S. Patent No. 8,756,364); and 13/287,081 (U.S. Patent No. 8,516,188).

Netlist filed a terminal disclaimer for the '506 patent on April 10, 2020, over the '608, '035, '587, and '632 patents.

**a. Hyun Lee's and Jayesh Bhakta's Alleged Conception and Reduction to Practice, and Regular Attendance at JEDEC Meetings**

Hyun Lee continued to regularly attend JEDEC meetings for at least the JC-40 committee and the JC-45 committee in 2011 and 2012, as well as before and after that timeframe. For instance, on information and belief, Hyun Lee attended at least the following JC-40 meetings: No. 168, Dec. 8, 2011; No. 169, Mar. 5, 2012; and No. 170, June 4, 2012. And, on information and belief, Hyun Lee attended at least the following JC-45 meetings: No. 33, Dec. 7-8, 2011; No. 34, Mar. 5, 2012; and No. 35, June 4, 2012.

By virtue of his attendance at those meetings, active involvement in JEDEC and otherwise, on information and belief, Hyun Lee was aware of the draft and final specifications for DDR4 LRDIMMs being considered and voted upon by those committees, including JESD82-32, dated November 2016, as well as prior drafts of it. For example, Intel presented and discussed Committee Item Number 158.01 ("DDR4 LRDIMM Proposal") at the December 8, 2011 meeting of JC-40, Committee Item Number 0311.14 ("Proposed DDR4 DB Training Modes") at the March 25, 2012 meeting of JC-40, and Committee Item Number 0311.12 ("Proposed DDR DB Buffer Control Words") at the June 4, 2012 meeting of JC-40.

On information and belief, the JESD82-32 standard was circulated at or before, and discussed at and voted on at or before, JC-40 and JC-45 committee meetings that Hyun Lee attended.

On information and belief, draft Committee Item Number 158.01 was created by employees of Intel Corp. and circulated at or before, and discussed at, the JC-40 committee meeting on December 8, 2011 that Hyun Lee attended.

On information and belief, draft Committee Item Number 0311.14 was created by employees of Intel Corp. and circulated at or before, and discussed at, the JC-40 committee meeting on Mar. 5, 2012 that Hyun Lee attended.

On information and belief, draft Committee Item Number 0311.12 was created by employees of Intel Corp. and circulated at or before, and discussed at, the JC-40 committee meeting on June 4, 2012 that Hyun Lee attended.

By virtue of his attendance at those meetings, active involvement in JEDEC and otherwise, on information and belief, Hyun Lee was aware of the draft and final specifications for DDR4 LRDIMMs being considered and voted upon by those subcommittees.

Draft specifications, ballots and presentations distributed to the members of the JC-40 and/or JC-45 committees of JEDEC were distributed to many (20+) key members of the interested public with the expectation they would be freely disclosed to and discussed with others. As such, they are prior art under 35 U.S.C. § 102 at least as of those distribution dates.

Distributed specifications, such as JESD82-32, are prior art under 35 U.S.C. § 102 at least as of their release dates.

The provisional application to which the '506 patent claims priority was filed on July 12, 2012, naming Hyun Lee as the inventor. Jayesh R. Bhakta was named as a co-inventor after the provisional was filed.

On information and belief, and based on Netlist's apparent view of the scope of the alleged invention, each of the draft DDR4 LRDIMM drafts and presentations disclose materially the same structure and functionality that Netlist accuses of infringing the claims of '506 patent.

On information and belief, after attending the June 4, 2012 meeting and listening to these ideas from other members of JEDEC, Hyun Lee returned to Netlist and hurriedly completed

drafting the provisional application to which the '506 patent claims priority, naming himself as the inventor, and had a provisional application filed on July 27, 2012. Netlist filed a request to correct inventorship on September 26, 2012, adding Jay R. Bhakta as a co-inventor.

**b. '506 Patent Prosecution and Corresponding Events**

Netlist filed the application, No. 16/391,151, that issued as the '506 patent on April 22, 2019.

On August 20, 2019, Netlist filed an Information Disclosure Statement (IDS) Form containing seven sheets. JEDEC DDR LRDIMM drafts and specifications were not included.

On January 8, 2020, Netlist filed an Information Disclosure Statement (IDS) Form containing twenty-two sheets. The cited references include numerous entire prosecution histories for other Netlist applications. JEDEC DDR LRDIMM drafts and specifications were not included.

On January 10, 2020, the examiner issued a Non-Final Rejection rejecting then-pending claim 1 for obviousness-type double patenting and as anticipated by U.S. Patent No. 8,565,033 ("Manoharajah").

On April 10, 2020, Netlist filed an Amendment and Request for Reconsideration after Non-Final Rejection. Netlist's response included a Terminal Disclaimer and canceled claim 1. Netlist added claims 2–21.

On July 23, 2020, the examiner issued a Notice of Allowance for the application that issued as the '506 patent.

On October 16, 2020, Netlist filed an Amendment after Allowance, and on October 22, 2020, Netlist paid the issue fee for the application that issued as the '506 patent.

On November 11, 2020, the examiner accepted the Amendment.

On November 18, 2020, the examiner issued an issue date notification for the application that issued as the '506 patent. That notification specified an issue date of December 8, 2020.

Netlist took no action to withdraw the application that issued as the '506 patent from issuance, or to otherwise continue prosecution of that application, and the application issued as the '506 patent on December 8, 2020.

**2. Netlist's Failure to Disclose the Drafts and Presentations for DDR4 LRDIMMs from the Dec. 8, 2011, Mar. 5, 2012, and June 4, 2012 JEDEC JC-40 Meetings Attended by Hyun Lee, and False Portrayal of Hyun Lee and Jayesh R. Bhakta as Inventors.**

At least according to Netlist's characterizations of the inventive aspects of the disclosure and claims of the '506 patent, the draft specifications and related presentations for DDR4 LRDIMMs that were presented at the Dec. 8, 2011, Mar. 5, 2012, and June 4, 2012 meetings disclose the key allegedly inventive aspects of the claims of the '506 patent. These draft specifications and presentations include Committee Item Number 158.01 from the December 2011 meeting (Ex. B), Committee Item Number 0311.14 from the March 2012 meeting (Ex. C), and Committee Item Number 0311.12 from the June 2012 meeting (Ex. D).

Even though at least Hyun Lee was present at the JEDEC meeting at which those presentations were made, witnessed those presentations, and was present for the discussions that occurred about them, and immediately thereafter drafted the provisional application to which the '506 patent claims priority, on information and belief, Hyun Lee did not disclose any of these drafts and the presentations to the examiner of the application that issued as the '506 patent.

Those drafts and presentations are prior art under 35 U.S.C. § 102 at least as of the meeting in which they were presented and discussed, and are not cumulative of other art or information before the examiner of the application that issued as the '506 patent.



Those drafts and presentations also illustrate that Hyun Lee falsely portrayed himself and Jayesh R. Bhakta as the inventors of the alleged inventions claimed in the '506 patent. At a minimum, those drafts and presentations illustrate that Hyun Lee, based on Netlist's infringement allegations, derived at least portions of the allegedly inventive aspects of the claimed inventions from others in attendance at the JC-40 meetings, who made those presentations on behalf of Intel, among others.

The Patent Office would not have allowed at least one claim of each of the '506 patents to issue had it been aware of those drafts and presentations, at least because it would have found the claims obvious over those drafts and presentations (either in combination with the knowledge of one of ordinary skill, in combination with art disclosing the basic architecture and functionality of DDR4 LRDIMMs), that there are joint inventors that were not properly named on the applications that issued as the '506 patent, and/or that the alleged inventions claimed therein had been derived in whole or in part from another.

The drafts and presentations that Hyun Lee failed to disclose to the Patent Office were not cumulative of other art before the examiner. The examiner stated that he allowed the claims because the art of record did not teach or suggest:

a memory controller system with memory modules having control and address signal lines implemented to be used corresponding to memory read operations to and from memory devices of the memory module that are arranged in multiple ranks with data buffers couple to memory devices, where memory read operations output read data and read strobes associated with memory read operations, and where the data buffer implemented delaying of a first read strobe by a predetermined amount, i.e. generating a delayed read strobe, sampling the first section of read data using the delayed read strobe, and transmitting the section of read data to a data bus, where the predetermined amount of delay is based at

least on signals received by the data buffer [during one or more previous operations] as claimed.

Notice of Allowability at 3–4. The withheld drafts and presentations for DDR4 LRDIMM explained the structure and operation of DDR4 LRDIMM devices, which Netlist argues practice the claims of the '506 patent. For example, Committee Item Number 158.01 (Ex. B), shows the accused DDR4 LRDIMM's structure, which Netlist argues includes the claimed “memory devices of the memory module that are arranged in multiple ranks with data buffers couple to memory device.” Ex. B at 2. Moreover, the draft specifications explain DDR LRDIMM's training modes including “Read Delay Training.” *See, e.g.*, Ex. C (Committee Item No. 311.14) at 8–9. Netlist argues that these training modes are used to determine the claimed “predetermined amount.”

On information and belief, Hyun Lee specifically intended to deceive the Patent Office into believing that Hyun Lee and Jayesh R. Bhakta were the sole inventors of the '506 patent, and/or that the claims of those patents are otherwise patentable, by withholding those drafts and presentations from the patent examiner during prosecution of the application that issued as the '506 patents. On information and belief, Hyun Lee engaged in this conduct as part of a scheme to monetize Netlist's patents through litigation against the industry.

\* \* \* \*

Inequitable Conduct: Any one or more acts set forth above are sufficient in and of itself/themselves to demonstrate that Netlist committed inequitable conduct during the prosecution of the '506 patent that renders the '506 patent unenforceable.

Unclean Hands: Furthermore, any one or more acts set forth above are sufficient in and of itself/themselves demonstrated that Netlist has unclean hands in relation to its assertion of the '506 patent that renders the '506 patent unenforceable.

**RESERVATION OF ADDITIONAL DEFENSES**

Samsung reserves the right to assert additional defenses that may surface through discovery in this action.

Date: May 18, 2022

Respectfully submitted,

/s/ Michael J. McKeon

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**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing document was filed electronically in compliance with Local Rule CV-5 on May 18, 2022. As of this date, all counsel of record have consented to electronic service and are being served with a copy of this document through the Court's CM/ECF system under Local Rule CV-5(a)(3)(A).

/s/ Michael J. McKeon

Michael J. McKeon